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INTERACTION BETWEEN EDUCATION AND ECONOMIC GROWTH: TRAINING FOR TEACHERS AND STUDENTS

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ABSTRACT

Education plays a strategic role in supporting sustainable economic growth. Teachers and students often lack a deep understanding of how education can drive economic growth through the development of relevant skills, innovation, and entrepreneurship. This training aims to improve teachers' and students' understanding of the relationship between education and economic growth. Using information related to economic growth as a source of learning materials can train teachers in developing learning strategies based on current sources. This activity also equips students with an understanding that economic growth can be used as a source of information to improve practical skills that can enhance their competitiveness in the workplace and can use economic growth as case study material. Furthermore, this training also aims to facilitate collaboration between educational institutions, businesses, and industry to create a more applicable learning ecosystem oriented to job market needs.

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INTRODUCTION

Education in Indonesia has a strategic role in shaping competitive human resources and contributing to economic growth. However, there is a significant gap between the education system and the needs of the world of work and industry. This is shown by data that states that in 2022, Indonesia has around 8.4 million unemployed people, with an open unemployment rate of 5.8% of the total labor force. Ironically, Vocational High School (SMK) graduates who should be ready for work actually contribute the highest unemployment rate, which is 11.1% (Datanesia, 2022). In May 2024, the Central Statistics Agency (BPS) recorded that the number of unemployed undergraduates, masters, and doctoral graduates reached around 452,713 people (Mashabi & Prastiwi, 2024). This figure consists of residents aged 15 to 24 years who are not working and are not currently studying or participating in training. As many as 5.18% of Bachelors enter the open unemployment rate (BPS, 2025).

From the perspective of teachers, there are still many who use traditional learning methods that are not fully relevant to the needs of the industry and the current world of work (Ibrahim et al., 2022). Lack of understanding of the concepts of skills-based economics, digitalization, and entrepreneurship in the curriculum is a major obstacle. In addition, the limited availability of training and learning materials that support innovation in the teaching procession causes education to not be able to provide students with the ability to meet market needs. As agents of change in the technological era, teachers must learn and prepare themselves proportionately to the role of technology and lecture mater. In addition, students are faced with the main challenge in the form of a lack of understanding of the direct impact of education on the economy. Many students pay more attention to academic theory than practical skills that can increase their competitiveness in the world of work and in business (Renanda, 2024). The curriculum implemented in most educational institutions in Indonesia is often not in line with the demands of the current world of work so that graduates find it difficult to adjust to the dynamic work environment.

Unemployment among job graduates is a problem that needs special attention when viewed from the trend. The high unemployment rate of job graduates reflects the gap between graduate competencies and industrial needs. Many industries require more specialized skills and prior work experience, which college education often lacks. Therefore, there needs to be specific rules that emphasize upskilling according to the needs of the job market, such as internship programs and vocational training. Strengthening entrepreneurial skills can be an alternative to reduce graduates' dependence on limited employment. Universities need to partner with industry so that the curriculum offered is in line with the development of the job

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market and responsive to these developments. The government is also expected to provide incentives to companies that are willing to recruit new graduates and train new graduates to work. This ideal series of strategic efforts will lead to a reduction in the unemployment rate faced by these graduates, who will also be better prepared to face future job challenges.

This community service activity aims to provide insight, knowledge, and skills to all participants by integrating education and economic development to be more relevant to the needs of industry and society. This program is in line with the theme carried out by Merdeka Learning Kampus Merdeka (MBKM) which emphasizes experiential learning and collaboration with the business world and society. Its implementation also supports the university's Key Performance Indicators (KPIs), especially in terms of student involvement in off-campus activities and building partnerships with universities and foreign communities. Through an applied approach, participants will gain hands-on experience in applying theory in real practice. The focus of this program is community service, where participants will apply themselves in an effort to overcome social and economic problems faced by the local community. These actions will also encourage cooperation between academics, students, and the community to create innovations that have a real impact. Therefore, this program is expected to improve the competence of participants and make a positive contribution to sustainability and socio-economic development. This program will continue to strive for sustainability so that its benefits can be felt by more and more people and become part of a greater synergy between universities and their environment.

Priority Issues

One of the main obstacles to the current education system is the gap between education and economic growth. The curriculum implemented in schools and universities is often out of step with the needs of modern industry, which causes graduates to have difficulty adapting to the demands of the industry. On the other hand, rapid economic growth demands a talented workforce that is in line with technological advances and industrial development. However, many educational institutions focus on academics without paying attention to the practical skills aspects related to the world of work. It is reported that many graduates fail to get jobs due to a lack of 'marketable' skills. Therefore, cooperation between the government and educational institutions is needed if a program to connect education and industry will be created to direct graduates to be able to work after graduation. Project programs to improve the profile of Pancasila students and skills-based training must also be expanded so that education is not only theoretical but also provides direct benefits in increasing economic productivity. If this gap is not addressed, economic growth will continue without the support

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of competent human resources, thereby reducing the competitiveness of the workforce in the global market.

The qualitative gap that occurs in the knowledge and skills of students and stakeholders, such as corporate and industry leaders, is another problem in the education sector. Many companies often complain that many recent graduates lack the problem-solving skills, communication skills, and use of technology that the corporate world needs. On the other hand, these institutions still train students in theoretical lessons without thoroughly guiding them through practical skills and soft skills that can help in their respective industries. The very minimal cooperation between schools and universities and industry to introduce graduates to the work environment also provides obstacles for graduates to adapt to a highly dynamic workplace. In addition, in the face of rapidly evolving technology, companies will need new workers to have digital literacy, while many graduates do not have those skills yet. Internships and closer industry collaboration can help reduce the education and workforce gap. Since the improvement of skills and knowledge in accordance with the demands of industry can give graduates a strong foundation to compete in the world of work, if the educational structure does not undergo reform immediately, then graduates will catch up more slowly and widen the gap between academia and the industrial world.

Another important problem is the tendency to overemphasize theoretical learning approaches in teaching and learning. This often results in teachers and lecturers emphasizing theoretical concepts in the classroom environment without relating them to what is happening in a practical field environment. Thus, students and prospective graduates usually have difficulty in recognizing how relevant the material taught to them is in meeting the requirements of the workplace and daily life. The main challenge on this list is the lack of training facilities and infrastructure for practice-based learning, including the lack of training for teachers on how to use project-based learning methods or problem-based learning. That explains the fact that many graduates know the theory but do not easily apply it in practice. This will require some changes in teaching styles to incorporate technophiles with a practical approach. Teachers and lecturers need to be further trained to be able to follow newer and interactive learning methods. If this is not developed in the near future, graduates will continue to struggle with the inability to apply the learning gained in a real work environment and social life

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LITERATURE REVIEW

Education

Education is a central social practice that plays a pivotal role in shaping societies and producing space (Lambrichts et al., 2020). It is being transformed by digital technologies, with trends affecting educational aims, contexts, learning processes, teaching methods, and governance (Bubbles et al., 2020). Education is resource-intensive and consequential for consumers and providers, with marketing scholars linking it to core frameworks and consumer behavior (Grewal et al., 2022). The 21st century has seen education become a competitive arena, with nations vying for leadership through modernization of their training systems (Rozanova, 2020). Critical perspectives in education philosophy emphasize its emancipatory potential and address issues of inequality and power dynamics (Sokhranyaeva & Zamotkin, 2020). The strength of nations can be measured by the quality of their universities and ability to develop talent (Kirby, 2024). Computing education research focuses on teaching fundamental digital concepts across all educational levels (Brinda, 2018). Quality education is crucial for individual health, wellbeing, and societal progress (Sahlberg & Goldfeld, 2023).

Economic Growth

Economic growth theories have evolved significantly over time, from classical models to modern endogenous growth theories. Early theories focused on factors like land, labor, and capital (Piętak, 2014), while contemporary models emphasize the role of technology, human capital, and innovation (Chukwuemeka, 2024; Siddiqui, 2020). Key contributors include Smith, Ricardo, Schumpeter, Keynes, Solow, and Romer (Kabul, 2020). The progression from exogenous to endogenous growth models has been a crucial development, with the Solow-Swan and Romer models being particularly influential (Chukwuemeka, 2024). Recent research has highlighted the importance of education, institutional factors, and international trade in driving economic growth (Krajcsik, 2015). Despite the diversity of theories, there is a growing consensus on the significance of human capital and technological innovation as primary drivers of long-term economic growth (Acevedo et al., 2012; Haciyev, 2021). The field continues to evolve, addressing contemporary challenges and debates in growth theory (Salvadori, 2003).

Education and Economic Growth

Education plays a crucial role in economic growth, as highlighted by various theories and empirical studies. Human capital theory, new economic growth theory, and theories related

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to social mobility emphasize education's contribution to enhancing labor quality, promoting innovation, and increasing social capital (Zhao, 2024). The relationship between education and economic growth has been studied extensively, with most research indicating a positive correlation (Khan & Malik, 2015; Patrinos, 1994). Education impacts growth through multiple channels, including improving productivity, wages, and technological diffusion (Conrad, 2017; Krajcsik, 2015). However, challenges such as inequality of access and poor infrastructure, particularly in developing countries like Indonesia, can hinder education's potential benefits (Surya et al., 2025). The evolution of economic growth theories has increasingly recognized education's importance, from classical models to contemporary approaches emphasizing human capital and institutional factors (Osmanković et al., 2011). Despite some inconclusive results, the consensus remains that education is a key driver of economic development (Kondybayeva et al., 2023).

MATERIAL AND METHOD

This community service was carried out on June 18, 2024, which was carried out in a hybrid manner at Jakarta State University with more than 150 participants consisting of teachers, lecturers and students from Indonesia and Malaysia. This community service is in order to improve the competence of teachers and students in the field of education by connecting economic growth. The implementation of activities is carried out in a participatory manner through four main stages, namely: (1) the preparation stage which includes an analysis of partner needs (need assessment); (2) planning and preparation of training materials (3) the activity soliaization stage (4) the training implementation stage which includes 30% theory sessions, 50% practice, and 20% discussion; (4) the evaluation and follow-up stage.

RESULT AND DISCUSSION

Observation and Planning

The community service team conducted an initial meeting at the observation and planning stage (Figure 1.). In the observation stage, it begins with analyzing the needs of economics teachers and students. The team analyzed how economic growth can be used as a learning medium and research media. The next stage is planning begins with correspondence with Universiti Kebangsaan Malaysia (UKM) implementation partners to delegate their lecturers in service activities. Next, the committee prepares correspondence such as a letter of request for permission to use the room, a letter of assignment for lecturers, an invitation letter for teachers and students, e-flayers, backdrops and other needs needed and the implementation

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of community service activities. After planning activities, there will be a division of tasks from each team member. The distribution was carried out during the meeting.

Figure 1. Observation and Planning Stage Meeting

The meeting at the observation and planning stage was held four times.

Socialization

Socialization was carried out by giving an invitation letter to schools that have a collaboration with the State University of Jakarta (UNJ) to send 2 teachers in the field of economics. Socialization is also carried out by informing students through a broadcast through whatsapp media where the content contains information about the implementation of community service activities. This socialization aims to provide information related to the implementation of international community service. This information is in the form of the theme or title of the activity, the time of implementation, the place of implementation and the resource persons from Universiti Kebangsaan Malaysia (UKM) and UNJ.

Implementation

The training with the theme "Integration of Education and Economic Growth" is designed for teachers and students to understand the relationship between education and economic growth and how to implement it in the world of education. There are three main focuses in the implementation of this activity, namely: conceptual, theoretical, implementation, case studies.

The implementation of training focused on conceptual and theoretical understanding. This session provided training to participants on conceptual and theoretical aspects in an effort to integrate education and economic growth. This activity provides a practical experience

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where teachers are asked to design economics-based learning materials, and students develop linking economic growth to lecture activities.

Figure 2. First Speaker

In the first session, it was delivered by Dr. Masrina Nadia Mohd Salleh from UKM. The first speaker delivered three main points of material designed to provide comprehensive insight to teachers and students. First, the speaker discussed general insights about the use of Artificial Intelligence (AI), starting from the basic definition, the development of AI technology, to the trend of its use globally. This material aims to provide conceptual understanding so that participants not only know the term AI, but also understand its role and impact in daily life. Second, the speakers reviewed various applications of AI in various fields such as health, industry, finance, and public services (Adithiyaa & Alamelu, 2024; Tandalaskar et al., 2024). By presenting concrete examples, participants are expected to see how AI has changed the way AI works and decision-making in various sectors.

The use of AI in the field of education in an effort to support academic literacy activities, the preparation of learning materials and the creation of scientific papers. The first speaker introduced various AI-based tools that can help teachers and in writing articles, proofreading scripts, paraphrasing, compiling citations, and helping in translation and finding relevant references. This material has been designed to equip teachers and students with practical skills that are applicable, so that they are able to use technology ethically and

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productively in producing quality papers for students and teachers and supporting the development of professionalism in the digital era.

Figure 3. Second Speaker

In the second session, it was delivered by Aditya Pratama, S.Pd., M.Pd from UNJ. The second speaker discussed the central topic of economic growth which was packaged conceptually and applicatively. The material begins with an explanation of the basic concept of economic growth, the indicators used to measure it, and the factors that affect the growth of a country. This explanation aims to provide participants with a comprehensive understanding of the importance of economic growth as one of the benchmarks for the success of national development. The second speaker also discussed the development of economic growth in Indonesia, including the dynamics that have occurred in recent years. This includes an analysis of GDP trends, the contribution of strategic sectors, and challenges and opportunities in the national and global economic contexts. The latest data and information will be presented to strengthen participants' understanding and provide insights relevant to actual conditions.

The material related to understanding the concepts and facts of economic growth in Indonesia is then directly related to learning activities in schools. The speaker will show how the topic of economic growth can be used as a teaching material that is contextual, interesting, and in accordance with the Independent Curriculum approach. Teachers are invited to develop learning strategies that encourage students to think critically about current economic issues. In addition, the material will also be associated with student research activities, especially in formulating topics relevant to Indonesia's economic conditions. Thus, students not only

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understand theory, but are also able to apply it in scientific analysis that is beneficial to society and the world of education.

Figure 4. Participant Reflection Session

Figure 5. Photo Session of Resource Persons

In the closing session, the participants were also encouraged to reflect and provide feedback in this activity. In addition, the participants will also receive a certificate of appreciation for their participation in the training held at UNJ.

Program Sustainability

To ensure the sustainability of this program, learning resources and digital materials will be prepared that can be used independently by teachers and students. For this reason, cooperation with educational institutions, industry, and the professional community will continue to be strengthened so that participants have wider access to skills development opportunities. Finally, this program is also expected to be a model that can be applied in many other institutions, so as to create synergy between education and economic growth at large.

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Partner Roles

SMEs are strategic partners in this community service program. The contribution of SMEs is mainly made up of prominent speakers with qualifications covering education and economics who present effective learning models to shape and modify the competencies of teachers and students. In addition, SMEs help design training modules for the formation of digital competencies, critical thinking, communication, creativity, and cooperative abilities that meet global educational standards. The SME team further conveyed their views through webinar sessions, panel discussions, and workshops to enrich participants in exchanging best practices that bridge education and economic growth. Collaboration on an international scale also allows SMEs to provide participants with access to knowledge-sharing programs absorbed on digital and academic platforms to make comparisons between educational practices in Indonesia and in Malaysia.

CONCLUSION AND RECOMMENDATION

This community service activity which discusses economic growth and its use in the context of education, teachers gain new insights to relate actual economic issues to the learning process, so that the material becomes more contextual and relevant for students. Meanwhile, students gain a deeper understanding of economic growth as the basis for formulating research topics that are actual, applicable, and useful for the development of science and society. Thus, this activity encourages teachers and students to think critically, innovatively, and productively in carrying out their roles in the world of education.

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